



What's Developing in Frederick

Solar Power Heating Up in Frederick | January 2016

Northwest of the bustling intersection between Interstate 25 and Highway 52 in Frederick's Wyndham Hill subdivision, rows of colorful, stylish homes continue to sprout from the ground like mushrooms, seemingly overnight, beneath the rolling hills and craggy peaks beyond. Construction has been steady in Wyndham for the last several years, but a closer look at its newest rooftops reveals evidence of what could be an important trend in Frederick – most of these homes are sporting shiny roof-mounted panels designed to convert Colorado's surplus of sunshine into clean electricity.

"Lennar [home builder] has put solar on every one of their new homes in Wyndham," said Frederick's Chief Building Official, Jason Overholt. "It has become standard." Solar panels – the glassy black rectangular plates, also known as solar cells – are part of a "photovoltaic system" that converts solar energy into electricity for use by homeowners. Solar systems offset household electric bills, sometimes dramatically so.

Prior to 2014, the Town had issued exactly ZERO permits for the installation of solar systems, but over the past two years Town staff has permitted 172 of them across Frederick. A total of 43 were approved in 2014, with triple that number (129) so far in 2015. If installation continues at the current rate, 387 more Frederick homeowners will go solar in 2016. "There was a definite push for it this year; the increase is tied to the available incentives," continued Overholt, who installed similar systems as the former owner of an electrical contractor business. "Solar installations can be pretty costly without the rebates and other incentives that are being offered. It is a pretty black and white correlation." Uncertainty as to the availability of some of those incentives has loomed as solar installation companies have braced themselves for the December 31, 2016 expiration of a federal incentive known as the "investment tax credit" (ITC), which has provided a thirty percent tax credit since 2006. Some of the uptick in solar installations seen in Frederick and around the U.S. can likely be attributed to a last-minute rush to capitalize on these temporary incentives.

However, the week of December 18, 2015, U.S. lawmakers

(first the House of Representatives and then the Senate) voted to extend the tax credit (as part of a larger spending bill) through 2019, with continued growth in the photovoltaic industry the likely result, once the measure is signed by the President. State incentives on sales, use and property taxes are also available.

Local utilities also offer incentives. Some Frederick residents receive electrical service from United Power, which is not offering solar incentives for 2016. However, some residents receive service from Frederick Light and Power, which offers up to \$1,000 in rebates after installing a solar system.

"When our residents buy less power, of course we do the same, so it does help," said Kent Van Dyne, Manager of Frederick Power and Light. "It's great to be able to rely on the sun to provide you with energy, and be less dependent on more complex types of fuels."

Residential solar systems are connected to the local electrical grid, so in the event that a given system produces more electricity than is actually used in that household, the excess electricity may be fed back into the grid and used elsewhere. In such a case, the electrical utility would actually owe the homeowner for that power and a credit to their account would be given.

According to the U.S. Energy Information Administration, the average U.S. household consumes about 911 kilowatt hours (kWh) of electricity per month. A kWh is a unit of measure for electricity used by utilities for billing and other purposes. It refers to the act of expending one kilowatt (1,000 watts, with one watt being equal to 1/746 horse power) of electricity over a span of one hour.

Frederick Light and Power offers an incentive of \$.06 per kWh of electricity produced beyond what is consumed in a given household.

"Residents do need to know that they WILL still have an electric bill in the way of a base rate charge, and normally will still have some usage," continued Van Dyne, regarding most solar-equipped homes in the Frederick Light and Power service area.



Most solar panels are being installed in three general areas of town in neighborhoods with new construction. Of the 172 residential solar permits issued in 2014 and 2015, 61 have been issued in Wyndham Hill alone. The area of No Name Creek, No Name Creek West and Johnson Farm accounted for 55 solar installations and the adjacent neighborhoods of Raspberry Hill and Eagle Valley contributed 25 more to the total permit count. The contiguous neighborhoods of Moore Farms, Fox Run and Summit View saw another 19 permits, with the remaining installations scattered around other areas of town.

Stay tuned for the second part of this installment on solar development in Frederick to learn more about the financial and environmental benefits of solar and the ins and outs of installing a system on your property.

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